

**In the Abstract:**

Please replace the abstract with the following:

~~This invention discloses a local area network including a hub, a plurality of nodes, communication cabling connecting the plurality of nodes to the hub for providing data communication, and a power supply distributor operative to provide at least some operating power to at least some of the plurality of nodes via the communication cabling~~

A power supply subsystem for providing electrical power to a local area network node over communication cabling, the power supply subsystem containing: a power management and control unit; programmable current limiting circuitry responsive to the power management and control unit to provide a programmable current limited output; voltage measurement means; and at least one of a combiner and a power supply interface operative to couple the programmable current limited output to the communication cabling. The power management and control unit is operative to: measure, utilizing the voltage measuring means at a plurality of pre-determined intervals, a voltage developed in accordance with the coupled programmable current limited output; and determine, as a consequence of the measured voltage whether characteristics of the node allow it to receive power over the communication cabling.